

## **REMARKS**

### **A. Status of the Claims**

Claims 1, 4-6, 10, 12, and 13 have been amended without prejudice. Support for the amendments can be found, e.g., in the original claims. New claims 20 and 21 have been added. Support for new claims 20 and 21 can be found, e.g., in original claim 9. Claims 7-9 and 14-19 have been canceled without prejudice. Claims 1-6, 10-13, 20, and 21 are now pending. Applicants respectfully submit that no new matter has been introduced in this amendment.

### **B. Election/Restriction**

In the Office Action, the Examiner acknowledged the provisional election made during the telephone conversation of October 23, 2006 between the Examiner and Morey Wildes, to prosecute the invention of Group I with SEQ ID NO: 1; and requested that this election be affirmed in replying to the Office Action.

In response, Applicants affirm the election of Group I.

### **C. Claim Objections**

In the Office Action, claim 5 was objected to for containing abbreviations "P5CS," "AtGolS3," and "NCED." The Examiner suggested that these abbreviations be designated in full form within parenthesis.

In response, Applicants submit that claim 5 was amended without prejudice in accordance with the Examiner's suggestion to designate the abbreviations in full form within parenthesis. Amended claim 5 recites:

The vector according to claim 4, wherein the structural coding sequences and/or regulatory coding sequences for enhancing stress tolerance are selected from the group consisting of the P5CS (delta-1-pyrroline-5-carboxylate synthase) gene, which is a key enzyme for proline synthesis, the AtGolS3 (arabidopsis thaliana galactinol synthase3) gene for galactinol synthesis, the Arabidopsis thaliana-derived DREB (dehydration responsive element binding protein) transcription factor gene, the rice-derived OsDREB (oryza sativa dehydration responsive

element binding protein) transcription factor gene, and the NCED (9-cis-epoxycarotenoid dioxygenase) gene, which is an enzyme involved in the synthesis of ABA (abscisic acid). (emphasis added).

Accordingly, Applicants submit that the objection has been overcome and request withdrawal of the objection.

In the Office Action, claims 8, 15, 17 and 19 were objected to on the grounds of: (i) depending on objected claim 5; and (ii) for failing to further limit the scope of claims 7, 14, 16 and 18. In response, Applicants submit that claims 8, 15, 17, and 19 have been canceled without prejudice, and request withdrawal of the objection.

#### **D. Claim Rejection – 35 U.S.C. 112**

In the Office Action, claims 1-2, 10 and 13 were rejected under 35 U.S.C. § 101 on the grounds of being directed to non-statutory subject matter. The Examiner suggested that “claim 1 be amended by replacing “A” before “rice-derived” with -- An isolated--, to identify a product that is not found in nature.”

In response, Applicants submit that, in accordance with the Examiner’s suggestion, claim 1 has been amended without prejudice to recite in pertinent part “An isolated A rice-derived promoter consisting of ...” Accordingly, Applicants submit that amended claim 1 is directed to statutory subject matter and request withdrawal of the rejection.

#### **E. Claim Rejection – 35 U.S.C. 112**

In the Office Action, claims 1-19 were rejected under 35 U.S.C. § 112, second paragraph, on the grounds of being indefinite.

With regard to claim 1, the Examiner stated that the term “stringent conditions” is not defined in the specification and is unclear. In response, Applicants submit that amended claim 1 does not recite the term “stringent conditions,” and request withdrawal of the rejection.

With regard to claims 4-6, the Examiner stated that the term “genes” is confusing, and suggested that the term “genes” be replaced with the term “coding sequences.” In response, Applicants submit that amended claims 4-6 recite “coding sequences” instead of “genes,” and request withdrawal of the rejection.

With regard to claims 7, 14, 16 and 18, the Examiner stated that these claims “are incomplete, since introducing the vector into any host does not result into a transgenic plant.” In response, Applicants submit that claims 7, 14, 16 and 18 have been canceled without prejudice, and request withdrawal of the rejection.

With regard to claims 10 and 13, the Examiner stated that these claims are indefinite because (i) they allegedly omit essential elements, and (ii) they recite the term “enhancing,” which according to the Examiner, is confusing, since the recitation lacks comparative basis.

In response, Applicants submit that claims 10 and 13 have been amended without prejudice to recite:

10. A method for enhancing stress tolerance of a plant, compared with a wild type of the plant, said method comprises: introducing the vector according to claim 4 into the plant.

13. A method for enhancing stress tolerance of a plant, compared with a wild type of the plant, said method comprises: introducing the vector according to claim 5 into the plant.

Applicants submit that the term “compared with a wild type of the plant” in amended claims 10 and 13 provides comparative basis for the term “enhancing” recited in these claims.

Accordingly, Applicants submit that the term “enhancing” in amended claims 10 and 13 is definite, at the very least because the term does have a comparative basis. Applicants further submit the scope of amended claims 10 and 13 will be clear to one skilled in the art, e.g., in view of the step of “introducing the vector ...into the plant” recited in these claims. Accordingly, Applicants request withdrawal of the rejection.

With regard to claims 2-3, 8-9, 11, 14-15 and 17, the Examiner stated that these claims were rejected for failing to overcome the deficiencies mentioned above. In response, Applicants submit that these deficiencies have been overcome for the reasons discussed above.

Accordingly, Applicants request withdrawal of the rejection.

#### **F. Claim Rejection – 35 U.S.C. 112**

In the Office Action, claims 1-19 were rejected under 35 U.S.C. § 112, first paragraph. The Examiner stated that the specification “does not reasonably provide enablement for a) a DNA comprising a nucleotide sequence that hybridizes to SEQ ID No: 1 under stringent conditions or a transgenic plant or a method of producing said transgenic plant comprising said DNA sequence b) *any* stress-inducible promoter activity of SEQ ID No: 1 other than dehydration, low temperature or salt inducible activity.” The Examiner also stated that the specification is “enable[ed] for a rice derived promoter as defined in SEQ ID NO: 1” and that the specification teaches “preparation of transgenic rice plants comprising SEQ ID NO: 1” and “teaches dehydration, salt and cold responsive activity of the promoter in the transgenic plants.”

In response, Applicants submit that amended claim 1 recites “[a]n isolated rice-derived promoter consisting of DNA that consists of the nucleotide sequence as shown in SEQ ID NO: 1.” Accordingly, Applicants submit that amended claim 1 is enabled by the specification, as the specification is enabled for “a rice derived promoter as defined in SEQ ID NO: 1,” as acknowledged by the Examiner in the Office Action.

With further regard to method claims 10 and 13, Applicants submit that these claims are directed in part to the preparation of transgenic plants comprising SEQ ID NO: 1, and that the present specification teaches “preparation of transgenic rice plants comprising SEQ ID NO: 1,” as acknowledged by the Examiner. Accordingly, Applicants submit that method claims 10 and 13 are enabled by the present specification.

With regard to claims 4-6 and 12, Applicants notes that amended claims 4-6, and 12 recite structural and/or regulatory “coding sequences” instead of structural and/or regulatory “genes,” and submit that “[t]he specification clearly provides guidance on a method of using a

vector comprising an abiotic stress-related coding sequence under the operable control of SEQ ID NO: 1 promoter to produce an abiotic stress tolerant plant,” as acknowledged by the Examiner. Accordingly, Applicants submit that claims 4-6 and 12 are enabled by the present specification.

With further regard to claim 12, Applicants respectfully note that this claim recites in part “[t]he vector according to claim 11, wherein structural coding sequences and/or regulatory coding sequences for enhancing stress tolerance are contained so as to be functional under the control of the promoter according to claim 2,” and that claim 2 is directed to “[t]he promoter according to claim 1, wherein the stress is dehydration stress, low temperature stress, or salt stress.” (emphasis added). Accordingly, Applicants submit that claim 12 is enabled by the present specification, as the specification “teaches dehydration, salt and cold responsive activity of the promoter in the transgenic plants,” as acknowledged by the Examiner.

With regard to claims 7-9 and 14-19, Applicants note that these claims have been canceled without prejudice, and submit that the rejection of these claims has been rendered moot by the cancellation of the claims.

For the foregoing reasons, Applicants request withdrawal of the enablement rejection of claims 1, 10 and 13, and the claims dependent thereon.

#### **G. Claim Rejection – 35 U.S.C. 112**

In the Office Action, claims 1-19 were rejected under 35 U.S.C. § 112, first paragraph on the grounds of lack of written description. The Examiner stated that “[t]he specification describes isolation of a rice promoter sequence as defined in SEQ ID NO: 1, and preparation of transgenic rice plants comprising SEQ ID NO: 1.”

In response, Applicants submit that the claims have been amended without prejudice and are now directed to “an isolated rice-derived promoter consisting of DNA that consists of the nucleotide sequence as shown in SEQ ID NO: 1” (see, e.g., claim 1), and to the preparation of transgenic plants comprising SEQ ID NO: 1 (see, e.g., claims 10, 12 and 13). As acknowledged

by the Examiner this subject matter was described in the original specification. Therefore, Applicants submit that the claims are in compliance with the written description requirement and request withdrawal of the rejection.

**G. Claim Rejection – 35 U.S.C. 102**

In the Office Action, claims 1-3, 7-11, and 13 were rejected under 35 U.S.C. § 102 (b) as being anticipated by Yang et al. (Plant Molecular Biology, 50:379-391, 2002). The Examiner stated that “[t]his rejection is made because DNA hybridization conditions recited in claim 1, part (b) reads on any rice-derived stress-inducible promoter DNA that would hybridize to SEQ ID NO: 1 under stringent conditions.”

In response, Applicants note that part (b) has been canceled from claim 1 without prejudice. Amended claim 1 recites “[a]n isolated rice-derived promoter consisting of DNA that consists of the nucleotide sequence as shown in SEQ ID NO: 1.”

Applicants submit that the Yang reference does not teach “[a]n isolated rice-derived promoter consisting of DNA that consists of the nucleotide sequence as shown in SEQ ID NO: 1” as recited in claim 1, at the very least, because the nucleotide sequence of OsEBP-89 promoter described in Yang is not included in the scope of amended claim 1. Therefore, Applicants request withdrawal of the anticipation rejection of claim 1 and the claims dependent thereon over the Yang reference.

In the Office Action, claims 1-3 were rejected under 35 U.S.C. § 102 (b) as anticipated by Sasaki et al. (NCBI, GenBank, Sequence Accession Number AP 005055, Published March 2002) (“the Sasaki reference”) taken with the evidence of Sasaki et al. (NCBI, GenBank, Sequence Accession Number AP005055, published November 2004). The Examiner stated “[t]his rejection is ...made because DNA hybridization conditions recited in claim 1, part (b) reads on any nucleotide sequence that would hybridize to SEQ ID NO: 1 under such conditions.”

In response, Applicants note that, as described above, part 1(b) has been deleted from claim 1 without prejudice. Amended claim 1 recites “[a]n isolated rice-derived promoter consisting of DNA that consists of the nucleotide sequence as shown in SEQ ID NO: 1.”

Applicants submit that the Sasaki reference does not teach “[a]n isolated rice-derived promoter consisting of DNA that consists of the nucleotide sequence as shown in SEQ ID NO: 1” as recited in claim 1, at the very least, because the nucleotide sequence P005055 and the nucleotide sequence in the BAC vector described in Sasaki reference is not included in the scope of amended claim 1. Therefore, Applicants request withdrawal of the anticipation rejection over the Sasaki reference of claim 1 and the claims dependent thereon.

#### **G. Claim Rejection – 35 U.S.C. 103**

In the Office Action, claims 4-6, and 14-19 were rejected under 35 U.S.C. § 103 (a) as being obvious over Yang et al. (Plant Molecular Biology, 50:379-391, 2002) in view of Dubouzet et al. (The Plant Journal, 33:751-763, 2003) (“Dubouzet reference”).

In response, Applicants submit that the combination of references cited by the Examiner, even if properly combinable (a position which is refuted), does not teach or suggest each and every element of the present claims.

Claims 4-6 depend of claim 1 and include all of the limitations of claim 1. Claims 14-19 have been canceled without prejudice.

As discussed above, the Yang reference does not teach or suggest “[a]n isolated rice-derived promoter consisting of DNA that consists of the nucleotide sequence as shown in SEQ ID NO: 1” as recited in claim 1.

The Dubouzet reference also does not teach or suggest “[a]n isolated rice-derived promoter consisting of DNA that consists of the nucleotide sequence as shown in SEQ ID NO: 1” as recited in claim 1. Applicants submit that the Dubouzet reference describes *Arabidopsis* with OsDREB gene under the control of 35S promoter. Applicants further submit that the

Dubouzet reference does not use a stress-inducible promoter, as it uses a constitutive promoter “35S promoter.” Accordingly, Applicants submit that the Dubouzet reference does not teach or suggest “[a]n isolated rice-derived promoter consisting of DNA that consists of the nucleotide sequence as shown in SEQ ID NO: 1” as recited in claim 1, and does not cure the deficiencies of the Yang reference. Accordingly, Applicants submit that the combination of the Yang reference and the Dubouzet reference does not teach or suggest each and every element of the present claims.

With regard to new claims 20 and 21, which recite in part “a monocotyledonous plant,” Applicants note that the Dubouzet reference does not use a monocotyledon plant, as recited in these claims, but rather uses the dicotyledon plant “*Arabidopsis*” as a host plant.

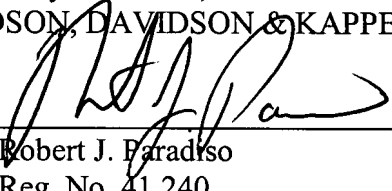
For the foregoing reasons, withdrawal of the obviousness rejection over the Yang reference and the Dubouzet reference is respectfully requested.

### **Conclusion**

Reconsideration of the present application, as amended, is respectfully requested. If the Examiner has any questions or concerns regarding this response and amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number set forth below.

Respectfully submitted,  
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